Sustainable Food Futures: from desirable visions to living laboratories (CONSENSUS)

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Postdoc Lunchtime Seminar Series
4th September 2013
Sustainable Eating & Kitchen Stories

- Importance of food vs consequences of eating
  - Embodied land, carbon, water use: climate change, biodiversity loss
  - 20-30% GHG emissions: agriculture
  - 900 million undernourished (FAO, 2013); 1 billion obese (WHO, 2013)
  - 30-50% food (1.2 - 2 billion tonnes) wasted

- CONSENSUS practice-orientated approach:
  - “Social practices involve a complex interplay between various elements including forms of bodily activities, forms of mental activities, ‘things’ and their use, a background knowledge in the form of understanding, know how, states of emotion and motivational knowledge” (Reckwitz 2002, p249)

- Kitchen Stories: attending to the demand-side
Sustainable Eating & Kitchen Stories

- **Kitchen Stories**
  - The impact of everyday activities
  - Household as smallest basic unit of everyday consumption
  - Kitchen as key site of eating in the household

**Backcasting approach: why 2050?**

- CONSENSUS participatory backcasting – co-creating innovations for sustainable practices
- Kitchens of the Future: past and present visions
‘Future Kitchen’: past and present visions

Dream Kitchen of Tomorrow (1957)

Ekokook (2010)

Technology-led examples...

Design & efficiency led...
Future Kitchens

Sustainability?
...but what about people & politics?
POP Backcasting approach

- Practice-orientated participatory backcasting
- Co-design approach
Sustainable Eating in 2050

**Smart Eating**
- Smart Phone: For online food ordering and by using QR scanners in green supermarkets and to give information on usual, environmental and health implications of food products.
- Smart Kitchen: Has a closed-loop energy recovery system.
- Intelligent Fridge: Good news,：less waste and information on leftovers, includes technical information for food safety.
- Subsidies to building and installing Smart Kitchens in your name.
- GM Technologies: Most foods can be grown locally without heavy resource inputs.

**Living Well**
- Where unprocessed soil is made into compost, composted and used as fertilizer from a multi-use fertilizer from a multi-use fertilizer and raw food waste is from recycling.

**Farmers Market**
- Food, artwork, music, poetry, and other food events are very popular in 2050.

**Community Eating**
- Community space provided by government for cooking, growing, eating together.
- Meat in a Trend:
  - Meat is regarded as a basic and healthy food, growing is important to society in 2050.
- Compact Recycling: Food waste is composted and used for fertilizer in communal and community gardens.

**Educated Eating**
- Green Supermarkets reduce over-purchasing and waste, left over/surplus foods given to charity.
- Agri-Tourism and Eco Holidays: Experience learning and earn credits gained from being on farm A in the field.

**Allotments**
- Legal status of allotments and grow gardens in integrated, building and land using regulations - everybody has the right to grow their own food.

**Alternative Education Techniques**
- Experiencing hands-on and life-long learning shape the new vision.
- Training for horticulture, food production and nutrition become integral school subjects.

**Carrot Food Budgets Personal Food Credits**
- Food is allocated a carbon rating related to its food miles and production intensity.

**Musical Urban Farms**
- High density urban farming.
Green Fast Food
food is easily available in canteens, small shops and to order online

Smart Phone
for online food shopping and for use as scanners in green supermarkets and to give information on social, environmental and health implications of food products

Smart Eating

Intelligent Fridge
gives menu suggestions and information on leftovers includes technical information for food safety

GM Technologies
most foods can be grown locally without heavy resource inputs

Smart Kitchen
- has a closed loop energy recovery system

Living Wall
where vegetables and herbs can be germinated, sprouted and grown using fertilizer from a food waste processor and filtered water from washing up

Subsidies
for building and installing Smart Kitchens in your home
Promising Practices & the Transition Framework

- Taking most promising elements from the scenarios:
  - Spaces for sustainable eating
  - Food Awareness
  - Smart Food

- Towards future practices of sustainable food consumption:
  The Transition Framework
  - Policy
  - Education & Community
  - Research & Business
# Transition Framework

**Towards Future Practices of Sustainable Food Consumption**

<table>
<thead>
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<tbody>
<tr>
<td><strong>Spaces for Sustainable Eating</strong></td>
<td><strong>FOOD AWARENESS</strong></td>
<td><strong>SMART FOOD</strong></td>
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<td>1. Identify and map spaces for growing, cooking and eating</td>
<td>3. Sustainable food labelling becomes mandatory</td>
<td>6. Responsive pricing reflects environmental, social and health aspects of food</td>
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<tr>
<td>2. Research is conducted about flexible work models</td>
<td>4. Standards for simple labelling system for sustainable food</td>
<td>7. ‘Smart Kitchen’ energy efficiency ratings are introduced</td>
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<td>3. Support community agriculture and local food markets</td>
<td>5. R&amp;D on life cycle impacts and environmental footprints of food</td>
<td>8. ‘Smartphones inform about food seasonality &amp; availability’</td>
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<td>4. Local and national ‘champions’ promote sustainable food</td>
<td>6. Social marketing to generate pride in health and wellbeing</td>
<td>9. Sensor technology adaptable to personal preferences available</td>
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<td>5. Networking of sustainable food and waste groups</td>
<td>7. ‘Food Dudes’ healthy eating programme is expanded</td>
<td><strong>EXISTING POLICY</strong></td>
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<td>6. Regulations restrict advertisements about unhealthy food</td>
<td>8. Sustainable food education integrated in ‘green schools’</td>
<td><strong>EU Regulation No (EU) 1169/2011 on the ‘provision of food information to consumers’ to come into force 2014 and 2016.</strong></td>
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<td>7. R&amp;D into the benefits and challenges of vertical farming</td>
<td>9. Cooking courses provided in supermarkets by celebrity chefs</td>
<td><strong>EU Milestone ‘Roadmap to a Resource Efficient Europe’: disposal of edible food waste to be halved in the EU by 2020.</strong></td>
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<td>2. Sustainable food labelling becomes mandatory</td>
<td>3. R&amp;D: development of intelligent devices in kitchens</td>
<td><strong>Irish Regulation on ‘advertising of unhealthy food and drink to children’ to come into force in July 2013.</strong></td>
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<td>3. Life cycle analysis &amp; sustainable food standards taught in schools</td>
<td>4. R&amp;D: closed loop systems &amp; energy recovery from waste</td>
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<td>4. Inter-agency collaboration between health and wellbeing bodies</td>
<td>5. Familiar learning of traditional food skills is encouraged</td>
<td><strong>Policy</strong></td>
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<td>5. Traditional ‘healthy eating’ food skills are promoted and exchanged</td>
<td>6. Guidance on policy around food safety, risk and liability</td>
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<td>6. Sustainable &amp; healthy food mainstreamed in public institutions</td>
<td>7. Opportunities to co-create food innovations are provided</td>
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<td>7. More choice of (smaller) food portions is available in restaurants</td>
<td>8. R&amp;D: personalised nutritional needs linked to technologies</td>
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<td>8. Leftover ideas for all food products are introduced in shops</td>
<td>9. Debulking the ‘myth of convenience’ in relation to food</td>
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<td>3. Demonstrations to mainstream energy recovery from food waste</td>
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<td>4. Social networks increase the visibility of healthy &amp; sustainable eating</td>
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<td>6. ‘Smart shopping’ reduces transport emissions and saves time</td>
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<td>6. Workshops to assist with self-build for smart food technologies</td>
<td>7. PPPs develop smart technologies for kitchens</td>
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Transition Framework

**Short (2012 - 2020)**

- Identify and map spaces for growing, cooking and eating
- Research is conducted about flexible work models
- Support community agriculture and local food markets
- Local and national ‘champions’ promote sustainable food
- Networking of sustainable food and food waste groups
- Regulations restrict advertisements about unhealthy food
- R&D into the benefits and challenges of vertical farming

**Medium (2020 - 2035)**

- Planning policies support communal growing and shared facilities
- Mechanisms to encourage flexible work models are piloted
- ‘Food sharing’ as a mode of exchange is piloted
- Expand role of local authorities to designate food spaces
- Education on food growing and cooking becomes mandatory
- Advertising restrictions on unhealthy food are evaluated
- Vertical farms are tested in vacant properties

**Long (2035 - 2050)**

- Infrastructure is provided for communal growing and eating
- Flexible work models are mainstreamed
- ‘Food sharing’ has become a societal norm
- Food sustainability standards for buildings are mainstreamed
- Communal food production and consumption is widespread
- R&D for closed loop food production in the home is developed
- Vertical farms in Irish cities are operating efficiently
CONSENSUS#2....from identified interventions to living laboratories

- **Living Laboratories:**
  - A research concept/methodology for developing, prototyping, applying and evaluating concepts in real life settings.
  - Co-creation, exploration, experimentation, evaluation

- **CONSENSUS InHaus:**
  - 5 week intensive living lab - different household types
  - User centred, open innovation, practice orientated
  - Full participation, feedback (blogs, ICT)
  - Helpline and home visits for support
CONSENSUS#2...Food Living Labs

- Partnership Development: WRAP UK, An Taisce GreenHomes, NWPP, Dublin Urban Farm, OBEO > UniLever, Whirlpool, Philips, Marks&Spencers...

- Aims, policy relevance and academic contributions
  - Implement and evaluate the adoption of socio-technological interventions to support behavioural changes
  - Real-life testing across different life-stages
  - Achieving transitions towards sustainability
  - Drivers, motivations, attitudes, challenges - durability
  - Private and public sector benefits – new goods and policies
  - Ultimately, ideas for people, policy and practice to increase efficiency of resource use relating to food consumption
Thank you for your attention

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